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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,843	07/18/2003	Harold Wiesmann	BSA 03-01	4758

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EXAMINER	
TALBOT, BRIAN K	
ART UNIT	PAPER NUMBER
1762	
MAIL DATE	DELIVERY MODE
08/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/622,843	WIESMANN ET AL.	
	Examiner	Art Unit	
	Brian K. Talbot	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26 and 57-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *59* is/are allowed.

6)☒ Claim(s) *1-26,57-58 and 60-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment filed 5/11/07 has been considered and entered. Claims 27-56 have been canceled. Claims 59-71 have been added. Claims 1-26 and 59-71 remain in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-22,24,26,57,58 and 60-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) in combination with EP-286,135.

Ovshinsky et al. (5,520,953) teaches a method of aligning the discrete brains of a multi-grained superconducting material. Ovshinsky et al. (5,520,953) teaches a superconducting precursor containing a parametric modifier, fluorine, the precursor compound being capable of

providing fluorine for incorporation into the perovskite ceramic based defect oxide material without effecting formation of the superconducting material. The fluorine modifier is added to the precursor mixture by a solid source or by gaseous treatment. The superconducting precursor is then heated in an oxidizing atmosphere to produce the superconducting film (col. 11, line 25 – col. 12, line 50).

deBarbadillo, II et al. (4,962,085) teaches a production of oxidic superconductors by zone oxidation of a precursor alloy. deBarbadillo, II et al. (4,962,085) teaches forming flouridized oxidic superconductors by inclusion of fluorine in the atmosphere surrounding the oxidizing zone (col. 3, lines 20-25).

Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) fails to teach spraying the superconductive precursor on a substrate to form a precursor film prior to adding the fluorine component.

EP-286,135 teaches flame spraying ceramic oxide superconductors. A superconductor of the formula $M^1M^2M^3$ is formed by flame spraying all the components or by flame spraying M^1 and M^2 and heat treating in an atmosphere of M^3. M^1M^2 comprise oxides, carbonated and fluorides of Cu, Y, Ba, Eu, Gd, etc. while M^3 comprises oxygen, fluorine, combination thereof, etc. The substrates include, aluminum oxide, silicon nitride, glass, metals, ceramics and polymers. The substrate can be preheated prior to flame spraying to obtain improved properties. (pg. 2, line 30 – pg. 6, line 20)

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085)

process by spraying the superconductive materials on the substrate with the expectation of achieving similar success.

With respect to the claims reciting carrier gases, specific precursors, etc, it is the Examiner's position that these variables are conventional and are a matter of design choice of one practicing in the art. One skilled in the art at the time the invention was made would have had a reasonable expectation of achieving similar results with any of the know carrier gases and precursors claimed.

Claims 23,25,70 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) further in combination with EP 286,135 still further in combination with JP 01-83651 or Ovshinsky et al. (5,102,860).

Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) further in combination with EP 286,135 fail to teach a plasma discharge for forming the superconducting material.

JP 01-83651 teaches a plasma discharge treatment of a superconducting film with a fluorine compound (abstract).

Ovshinsky et al. (5,102,860) teaches fluorinating a ceramic oxide including a superconducting ceramic oxide. The fluorination process is performed in a fluorine atmosphere by glow discharge plasma (col. 7, lines 40-50).

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) further in combination with EP 286,135 process by utilizing a plasma discharge as evidenced by JP 01-83651 or Ovshinsky et al. (5,102,860) with the expectation of achieving similar results.

Allowable Subject Matter

5. Claim 59 is allowed.

Reasons for Allowance

6. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach forming a superconducting ceramic by fluorinating a superconducting precursor and transforming that fluorinated precursor to a superconducting film having only trace amounts of fluorine. The prior art teaches "fluorinated superconductors having more than a trace of fluorine in the superconducting film.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Amendment

7. Applicant's arguments filed 5/11/07 have been fully considered but they are not persuasive.

Applicant argued that the prior art taught fluorinating a superconducting material and not a precursor.

Ovshinsky et al. (5,520,953) or deBarbadillo, II et al. (4,962,085) both teach fluorinating superconducting precursor materials prior to oxidation to form the final superconducting material. It is noted that Applicant directed the Examiner to col. 9 lines 8-15 to support the statement that a "superconductor" is fluorinated and not the precursor. The Examiner agrees in part, but direct Applicant to continue on pg. 9, line 30-60 whereby Ovshinsky et al. (5,520,953) sates "the parametric modifier is preferably introduced into the perovskite ceramic based defect oxide material by exposing the precursor mixture of compounds to a source of parametric modifier elements"...."so that when the mixture (including the parametric element – added by Examiner) is fired in an oxidizing atmosphere to form the superconducting film. Hence, it is clear that the fluorination is done prior to the superconducting film is produced.

Applicant argued that the prior art teaches that the precursor is "has a least one superconducting phase" which is different from the claims which recite "substantially non superconducting".

The Examiner agrees in part. While the reference Ovshinsky et al. (5,520,953) teaches "at least one superconducting phase", it does not teach that the precursor is primarily comprised of this superconducting phase. The term "substantially" means that the precursor film is "less than 50%" non-superconducting and hence it is the Examiner's position that the phrase "at least one superconducting phase" would meet this definition of "less than 50%" and in fact meet the claimed limitation.

Applicant argued that the prior art fail to teach the fluorinated gas being a hydrfluorocarbon.

The Examiner agrees. While the Examiner acknowledges the fact that the fluorinated gases taught by the prior art are not hydrofluorocarbons, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of achieving a fluorinated precursor with the use of any known variety of "fluorinated materials", including the claimed hydroflourocarbons absent a showing of unexpected results garnered from the claimed HFC's. No such unexpected results have been furnished.

Applicant argued that the prior art incorporated solid fluorine into the precursor and not a gaseous fluorine and that this forms a different product.

The Examiner agrees in part. While deBarbadillo, II et al. (4,962,085) may teach adding a solid fluorine compound, the combination of Ovshinsky et al. (5,520,953) would suggest one skilled in the art that the addition of fluorine into the superconducting film can be performed successfully by adding the fluorine as a gaseous compound. It has been well settled that the the test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges,* 783 F.2d 1038.

Regarding the claimed products being different from those produced by the prior art, i.e. superconducting film having trace amounts versus larger amounts (fluorinated superconductors).,

the claims are not limited as argued. Only claim 59 recites a superconducting film with a trace amount of fluorine whereas the other claims recite broadly "forming a crystalline superconducting ceramic – claim 26", "forming a fluorinated precursor – claims 1,60 – not product even claimed", "crystalline film – claim 57" and are met by the prior art.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B K Talbot 8/5/07

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT